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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/781,317

02/18/2004

Matthew D. Cawood

64535

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7590

02/09/2005

EXAMINER

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ART UNIT

PAPER NUMBER

2833

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/781,317	CAWOOD ET AL.	
	Examiner	Art Unit	
	Alexander D. Gilman	2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-78 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-78 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03/10/2004</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 27, 28, 31, 34-37, 39, 40, 43-47, 49, 50, 53-56, 58, 59, 61-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Mucci.

With regard to claims 27, 28, 31, 39, 40, 49, 50, 53, 58, 59, 61 Mucci disclose all of the limitations as applied to claims 1, 2, 4 below.

With regard to claims 32-37, 44-47, 54, 55, 56, 62-64 Mucci disclose all of the limitations as applied to claims 6-10 below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 66-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGrane et al in view of Hills et al.

With regard to claim 1, McGrane (US 6,263,567) disclose an electrical connector comprising:
a conductive body (30a) having at least one conductor

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receiving passageway therein (31a) to receive the conductor of the at least one cable end, said conductive body also having at least one fastener receiving passageway (the passage for 35a) intersecting the at least one conductor receiving passageway;

at least one fastener (35a) positioned in the at least one fastener receiving passageway for securing the conductor within the at least one conductor receiving passageway;

McGrane does not disclose at least one insulating boot associated with said at least one conductor receiving passageway

Hills et al (US 5,149,281) disclose at least one insulating boot (12) associated with said at least one conductor receiving passageway and comprising at least one an insulating tube, and at least one rupturable seal (60) closing said insulating tube and rupturing upon initial insertion of the cable end therethrough, said at least one rupturable seal also being compliant to accommodate different sized cable ends and form a seal with adjacent portions of the cable end.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the McGrane connector with the boot , as taught by Hills et al et al , to enviromentally protect the connector.

With regard to claim 2, McGrane when modified by Hills et al disclose (Hills et al) that said at least one rupturable seal comprises a layer a plurality of radially oriented lines of weakness (64)

With regard to claim 3, McGrane when modified by Hills et al disclose (Hills et al) that said at least one rupturable seal comprises a layer having a plurality of successive concentric rings of weakness therein (Fig. 3, areas between circular ribs) .

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With regard to claim 4, McGrane when modified by Hills et al disclose (Hills et al) that said at least one rupturable seal comprises a layer being puncturable and having a percentage elongation to yield of not less than about 300 percent (assuming that a thinnest portion of conductor as a wire can be sealed by the seal 60) .

With regard to claim 5, McGrane when modified by Hills et al disclose (Hills et al) that said at least one rupturable seal is more compliant than said insulating tube.

With regard to claim 6, McGrane when modified by Hills et al disclose (Hills et al) that said at least one insulating boot comprises a thermoplastic elastomer (col. 4, lines 14-19).

With regard to claim 9, McGrane when modified by Hills et al disclose (Hills et al) that said at least one insulating boot further comprises a lubricant (54) within said insulating tube.

With regard to claims 66-71, McGrane when modified by Hills et al disclose the structure which is operated using steps claimed

Claims 1, 7-12, 14, 22-24, 26, 66, 72-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGrane et al in view of Mucci.

With regard to claim 1, McGrane (US 6,263,567) disclose an electrical connector comprising: a conductive body (30a) having at least one conductor receiving passageway therein (31a) to receive the conductor of the at least one cable end, said conductive body also having at least one fastener receiving passageway (the passage for 35a) intersecting the at least one conductor receiving passageway; at least one fastener (35a) positioned in the at least one fastener receiving passageway for securing the conductor within the at least one conductor receiving passageway;

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McGrane does not disclose at least one insulating boot associated with said at least one conductor receiving passageway

Mucci (US 4,192,569) disclose at least one insulating boot (1) associated with said at least one conductor receiving passageway and comprising at least one an insulating tube, and at least one rupturable seal (2) closing said insulating tube and rupturing upon initial insertion of the cable end therethrough, said at least one rupturable seal also being compliant to accommodate different sized cable ends and form a seal with adjacent portions of the cable end.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the McGrane connector with the boot , as taught by Mucci , to enviromentally protect the connector.

With regard to claim 7, McGrane when modified by Mucci disclose (Mucci) that said at least one insulating boot further comprises an elastic body (col. 2, lines9-13) contained within said insulating tube for urging said at least one rupturable seal radially inward.

With regard to claim 8, McGrane when modified by Mucci disclose (Mucci) that said at least one insulating boot further comprises a sealant material (col. 2, lines9-13) within said insulating tube.

With regard to claim 9, McGrane when modified by Mucci disclose (Mucci) a lubricant (col. 2, lines9-13)

With regard to claims 10 and 11, McGrane when modified by Mucci disclose (Mucci) that said at least one rupturable seal comprises a first rupturable seal (2) at a distal end of said insulating tube, and a second rupturable seal (3) at a medial portion of said insulating tube.

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With regard to claim 12, McGrane when modified by Mucci disclose (Mucci) that said insulating boot further comprises a sealant material (col. 2, lines 9-13) between the first and second rupturable seals.

With regard to claims 66, 72-77, McGrane when modified by Mucci disclose the structure which is operated using steps claimed

With regard to claims 14, 21-24, 26, McGrane when modified by Mucci disclose all of the limitations as applied to the respective claims 1, 7-9, 11 above.

Claims 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGrane et al in view of McGrane-Mucci, and further in view of Hills et al as applied to claims 1-6 above

Claims 13, 25, 38, 48, 57, 65, 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGrane et al in view of Hills et al as applied to claim 1 above, and further in view of Cooper, Jr..

McGrane when modified by Hills et al do not disclose that insulating tube further comprises a series of gripping rings on an interior proximal end thereof.

Cooper, Jr (US 4,283,597) disclose a series of gripping rings (between 18) on an interior proximal end thereof.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the McGrane –Hills et al connector with the gripping rings, as taught by Cooper, Jr, to Improve sealant properties of the boot.

With regard to claim 78, McGrane-Hills et al when modified by Cooper, Jr disclose the structure which is operated using steps claimed

Claims 29, 32, 33, 35, 41, 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mucci in view of Hills et al.

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With regard to claims 29,32,33, 41, 51 Mucci disclose all of the limitations as applied to claims 27, 5, 6, above.

Claims 3, 30, 42, 52, 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mucci in view of Melton

Mucci does not disclose that at least one of said first and second seals comprises a layer having a plurality of successive concentric rings of weakness therein.

Melton (US 3,596,231) disclose a plurality of successive concentric rings of weakness (the concentric areas separated by 41) .

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the Mucci's boot with the reinforcing ring , as taught by Melton, to optimize flexibility of the seal.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander D. Gilman whose telephone number is 571 272-2004. The examiner can normally be reached on Monday-Friday, 10:30 a.m. - 8:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571 272-2800 ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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02/04/2005

Alex Gilman

02/05/05

ALEXANDER GILMAN
PRIMARY EXAMINER